WHAT IS CLAIMED IS:

1. A mechanism simulation method of performing a mechanism simulation using both a dynamics simulation and a kinematic simulation, wherein in the dynamics simulation, a behavior of a mechanism is simulated using a dynamics model including a continuous system equation having a plurality of variables, and in the kinematic simulation, a geometrical operation of the mechanism is simulated using a three-dimensional mechanism model including a plurality of mechanism elements, the method comprising:

calculating a value of one of the variables of the continuous system equation by a first simulator that executes the dynamics simulation;

identifying a mechanism element corresponding to a variable having the calculated value, referring to a table that represents a correspondence between the variables and the mechanism elements;

transmitting, to a second simulator, information specifying the identified mechanism element and the calculated value of the variable; and

executing the kinematic simulation by the second simulator based on the information.

2. A mechanism simulation method according to claim 1, wherein the dynamics model includes a hybrid model comprising a continuous system model and a state transition model, and the dynamics simulation includes

a hybrid simulation.

3. A mechanism simulation method according to claim 1, wherein the state transition model inputs a control signal from an external mechanism control software system.

4. A mechanism simulation method according to claim 1, wherein the mechanism elements include a rotation angle or displacement of an actuator.

5. A mechanism simulation method according to claim 1, further comprising:

reading data representing the variables of the dynamics model;

reading data representing the mechanism elements of the three-dimensional mechanism model;

extracting, from the data representing the variables, a plurality of selective variables each of which enables to be associated with any one of the mechanism elements;

extracting, from the data representing the mechanism elements, a plurality of selective mechanism elements each of which enables to be associated with any one of the variables; and

receiving a selection which is made by a user and is indicative of a combination of one of the plurality of selective variables and one of the plurality of selective mechanism elements, to generate the table based on the selection.

6. A mechanism simulation method according to claim 5, wherein the one of the plurality of selective variables in the combination is selected by:

selecting a class to which the selective variables belong, and

selecting a member variable in the class.

7. A mechanism simulation method according to claim 5, wherein data of the dynamics model includes a description data described in a hybrid model language.

8. A mechanism simulation method according to claim 5, further comprising storing the generated table to a file.

9. A computer program stored in a computer readable medium for performing a mechanism simulation using both a dynamics simulation and a kinematic simulation, wherein in the dynamics simulation, a behavior of a mechanism is simulated using a dynamics model including a continuous system equation having a plurality of variables, and in the kinematic simulation, a geometrical operation of the mechanism is simulated using a three-dimensional mechanism model including a plurality of mechanism elements, the program comprising:

means for instructing a computer to calculate a value of one of the variables of the continuous system equation by a first simulator that executes the dynamics simulation;

means for instructing the computer to identify a mechanism element corresponding to a variable having the calculated value, referring to a table that represents a correspondence between the variables and the mechanism elements;

means for instructing the computer to transmit, to a second simulator, information specifying the identified mechanism element and the calculated value of the variable; and

means for instructing the computer to execute the kinematic simulation by the second simulator based on the information.

10. A computer program according to claim 9, wherein the dynamics model includes a hybrid model comprising a continuous system model and a state transition model, and the dynamics simulation includes a hybrid simulation.

11. A computer program according to claim 9, wherein the state transition model inputs a control signal from an external mechanism control software system.

12. A computer program according to claim 9, wherein the mechanism elements include a rotation angle or displacement of an actuator.

13. A computer program according to claim 9, further comprising:

means for instructing the computer to read data

representing the variables of the dynamics model;

means for instructing the computer to read data representing the mechanism elements of the three-dimensional mechanism model;

means for instructing the computer to extract, from the data representing the variables, a plurality of selective variables each of which enables to be associated with any one of the mechanism elements;

means for instructing the computer to extract, from the data representing the mechanism elements, a plurality of selective mechanism elements each of which enables to be associated with any one of the variables; and

means for instructing the computer to receive a selection which is made by a user and indicative of a combination of one of the plurality of selective variables and one of the plurality of selective mechanism elements, to generate the table based on the selection.

14. A computer program according to claim 13, further comprising:

means for instructing the computer to select a class to which the selective variables belong, and

means for instructing the computer to select a member variable in the class, thereby selecting the one of the plurality of selective variables in the combination.

15. A computer program according to claim 13, wherein data of the dynamics model includes a description data described in a hybrid model language.

16. A computer program according to claim 13, further comprising means for instructing the computer to store the generated table to a file.